# CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER: 89884

**CHEMISTRY REVIEW(S)** 

38. Chemistry Comments to be Provided to the Applicant

ANDA: 89-884, 89-885, 89-886

APPLICANT: Hercon Laboratories, Corporation.

DRUG PRODUCT: Nitroglycerin Transderml Patch, 0.2 mg/hr, 0.4 mg/hr

and 0.6 mg/hr.

The deficiencies presented below represent Major deficiensies.

We await the response to our letter dated May 30, 1997, from the Division of Bioequivalence, which contained major deficiencies related to the bioequivalence portion of your applications.

Please be advised that the suitability of the proposed drug release specifications will be established upon completion of review by the Division of Bioequivalence and should be incorporated into the appropriate chemistry, manufacturing and controls sections of your applications. Any changes made to the chemistry, manufacturing and controls sections of your application as a result of responding to the outstanding bioequivalence deficiencies must be submitted for review. We further request that you do not respond to this communication until you have responded to all outstanding bioequivalence and labeling issues.

Sincerely yours,

Frank O. Holcombe, Ur., Ph.D.

Director

Division of Chemistry II Office of Generic Drugs

Center for Drug Evaluation and Research

#### CHEMIST'S REVIEW ANDA 89-886

#### 3. NAME AND ADDRESS OF APPLICANT

Hercon Laboratories Corporation South Plainfield, NJ

#### 6. NAME OF DRUG

Nitroglycerin Transdermal

#### 11. HOW DISPENSED

Rx

#### 12. RELATED IND/NDA/DMF(s)

89-884, 885, 886

#### 13. DOSAGE FORM(s)

14. POTENCY

Transdermal System

15 mg/24 hours

#### 16. RECORDS AND REPORTS

Current - yes

#### 17. COMMENTS

Bio to be added at a later date.
The firm currently holds approved ANDA 88-782 and 88-783.
5 and 15 mg per 24 hours patch.
The only difference for the current pending ANDAs is the vinyl backing (previously foam backing) which is sealed off by a lining, so it'll not be in contact with drug reserves.

#### 18. CONCLUSIONS AND RECOMMENDATIONS

Not Approvable

19. REVIEWER:

DATE COMPLETED:

Bart Ho

20. COMPONENTS AND COMPOSITION

See attached

#### 21. FACILITIES AND PERSONNEL

Base liquid polymer made at the which was made into FD by the addition of Brief description provided.

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information Chem Review

#### 1. CHEMISTRY REVIEW NO #2

2. <u>ANDA</u> 89-884 89-885 89-886

3. NAME AND ADDRESS OF APPLICANT
Hercon Laboratories Corporation
Attention: Joseph J. Sobecki
P.O. Box 786
York, PA 17405

4. LEGAL BASIS FOR SUBMISSION
Conditionally approved marketed transdermal nitroglycerin product (Transderm-Nitro, Summit Pharmaceuticals[Ciba]).
Transderm-Nitro, release rate 0.2, 0.4 and 0.6 of nitroglycerin per h; Summit Pharmaceuticals (Ciba).
NDA-20-144. The reference listed drug is not entitle to a period of exclusivity under section 505(j)(4)(D) of the FDC act. According to Hercon Lab. no patent information has not

act. According to Hercon Lab. no patent information has not been filed claiming the product which is the subject of this application. Nitroglycerin is a DESI drug.

Hercon legal basis for submissions:

December 4, 1987 for Nitro-Bid Ointment-Marion Lab.
June 1, 1989 for NTS Nitroglycerin Transdermal-Bolar.
August 20, 1992 for Nitro-Dur-Key Pharmaceuticals.
April 27, 1993 for Transderm-Nitro-Summit Pharmaceuticals (Ciba). The product has been completely reformulated. The firm stated that this response makes all previously submitted material moot. Therefore, this represents an original application.

- 5. <u>SUPPLEMENT(s)</u> N/A
- 6. PROPRIETARY NAME N/A
- 7. <u>NONPROPRIETARY NAME</u> Hercon Nitroglycerin Transdermal System
- 8. <u>SUPPLEMENT(s) PROVIDE(s) FOR:</u>
  N/A
- 9. AMENDMENTS AND OTHER DATES:

Firm:

November 12, 1987: Original Submission
December 4, 1987: New correspondence
March 10, 1988: New correspondence
March 11, 1988: Amendment for labeling
May 11, 1988: Amendment for labeling

June 1, 1989: new corres. (address change) August 20, 1992: new corresp.

April 27, 1993: Major amendment

FDA:

December 8, 1987: Acknowledgement letter February 17, 1988: deficiency letter

February 17, 1988: Letter for the review by HFN-180

April 25, 1988: labeling deficiency letter May 18, 1988: information letter

August 31, 1988: labeling deficiency letter

PHARMACOLOGICAL CATEGORY 10.

11. Rx or OTC

Coronary vasodilator

Rx

RELATED IND/NDA/DMF(s) 12.

DMF#

DMF#

DMF#

DMF#

DMF#

13. DOSAGE FORM

14. POTENCY

Transdermal System

0.2 mg/hr, 0.4 mg/hr

and 0.6 mg/hr

15. CHEMICAL NAME AND STRUCTURE

> 1,2,3-propanetriol, trinitrate. MW= 227.09 C3H5N3O9

> > CH2ONO2 . CHONO2 . CH2ONO2

RECORDS AND REPORTS

Phone conversation between Hercon and V. Vashio on 8-19-92. Phone conversation between Hercon and Cecilia Parise on 5-

24-93.

17. COMMENTS

The following deficiencies found in the review

- -Drug substance
- -other ingredients
- -DMF
- -Manufacturing
- -Container/closure
- -Laboratory controls
- -Method validation
- -Stability
- -Labeling
- -Bioequivalence

18. CONCLUSIONS AND RECOMMENDATIONS

> This application is considered as not approvable. The letter will be issued. The amendment will be considered

major.

REVIEWER: Sema Basaran Ph.D. 19.

DATE COMPLETED: 8-16-93

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commercial

information

Chem-Review #2

#### 1. CHEMISTRY REVIEW # 3

#### 2. ANDA 89-884 89-885 489-886

#### NAME AND ADDRESS OF APPLICANT 3. Hercon Laboratories Corporation Attention: Joseph J. Sobecki P.O. Box 786 York, PA 17405

LEGAL BASIS FOR SUBMISSION Conditionally approved marketed transdermal nitroglycerin product (Transderm-Nitro, Summit Pharmaceuticals [Ciba]). Transderm-Nitro, release rate 0.2, 0.4 and 0.6 of nitroglycerin per h; Summit Pharmaceuticals (Ciba). NDA-20-144. The reference listed drug is not entitle to a period of exclusivity under section 505(j)(4)(D) of the FDC act. According to Hercon Labs. patent information has not been filed claiming the product which is the subject of this application. Nitroglycerin is a DESI drug.

Hercon's legal basis for submissions: December 4, 1987 for Nitro-Bid Ointment-Marion Lab. June 1, 1989 for NTS Nitroglycerin Transdermal-Bolar. August 20, 1992 for Nitro-Dur-Key Pharmaceuticals. April 27, 1993 for Transderm-Nitro-Summit Pharmaceuticals (Ciba). The product has been completely reformulated. firm stated that this response makes all previously submitted material moot. Therefore, this represents an original application.

- 5. SUPPLEMENT(s) N/A
- PROPRIETARY NAME 6. N/A
- 7. NONPROPRIETARY NAME Hercon Nitroglycerin Transdermal System
- 8. SUPPLEMENT(s) PROVIDE(s) FOR: N/A
- 9. AMENDMENTS AND OTHER DATES:

Firm:

November 12, 1987: Original Submission December 4, 1987: New correspondence

ANDA 89-884/885/886 Review#3

March 10, 1988: New correspondence

March 11, 1988: Amendment for labeling May 11, 1988: Amendment for labeling

June 1, 1989: new corres. (address change)

August 20, 1992: new corresp.

April 27, 1993: Major amendment

April 29, 1994: Major amendment

December 8, 1994: Major amendment

FDA:

December 8, 1987: Acknowledgement letter

February 17, 1988: Deficiency letter

February 17, 1988: Letter for the review by HFN-180

April 25, 1988: labeling deficiency letter

May 18, 1988: information letter

August 31, 1988: labeling deficiency letter

October 29, 1993: Deficiency letter

August 18, 1994: Bio-major deficiency letter

10. PHARMACOLOGICAL CATEGORY Coronary vasodilator 11. Rx or OTC Rx

12. RELATED IND/NDA/DMF(s)

DMF#

DMF#

DMF#

DMF#

DMF#

13. DOSAGE FORM

Transdermal System

14. POTENCY

0.2 mg/hr, 0.4 mg/hr

and 0.6 mg/hr

15. CHEMICAL NAME AND STRUCTURE

1,2,3-propanetriol, trinitrate. MW= 227.09

C<sub>1</sub>H<sub>4</sub>N<sub>1</sub>O<sub>6</sub>

CH2ONG2 . CHONO2 . CH2ONO2

16. RECORDS AND REPORTS

Phone conversation between Hercon and V. Vashio on 8-19-92. Phone conversation between Hercon and Cecilia Parise on 5-24-93.

Memo from Donald Hare to William Rickman on February 2, 1995, regarding the approval of Schering-Key's supplement which would grant unconditional approval to Nitro-Dur. Schering-Key has submitted a formulation patent which will be listed in the Orange Book at the time of approval. All firms with a pending 505 (b) (2) or 505 (j) application using

the Schering product as the reference drug will have to amend their

applications with an appropriate patent certification when the Orange Book displays this formulation patent on the approved Nitro-Dur transdermal patch.

Debarment certification is included in December 8, 1994, amendment.

#### 17. COMMENTS

The following deficiencies found in the review

- -DMF
- -Manufacturing
- -Laboratory controls
- -Labeling
- -New Bioequivalence studies pending
- -EER-reinspection requested
- 18. CONCLUSIONS AND RECOMMENDATIONS

  This application is considered as not approvable. The letter will be issued consistent with the letter for applications 88-782, 88-783 and 89-516 (reviewed by G.Smith). The amendment will be considered major.
- 19. REVIEWER: DATE COMPLETED:
  Sema Basaran Ph.D. 4-5-95

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Chem Review#3

#### 1. CHEMISTRY REVIEW # 4

- 2. <u>ANDA</u> 89-884 89-885 189-886
- 3. NAME AND ADDRESS OF APPLICANT
  Hercon Laboratories Corporation
  Attention: Joseph J. Sobecki
  P.O. Box 786
  York, PA 17405
- LEGAL BASIS FOR SUBMISSION
  Conditionally approved marketed transdermal nitroglycerin product (Transderm-Nitro, Summit Pharmaceuticals[Ciba]).
  Transderm-Nitro, release rate 0.2, 0.4 and 0.6 of nitroglycerin per h; Summit Pharmaceuticals (Ciba).
  NDA-20-144. The reference listed drug is not entitle to a period of exclusivity under section 505(j)(4)(D) of the FDC act. According to Hercon Labs. patent information has not been filed claiming the product which is the subject of this\_application. Nitroglycerin is a DESI drug.

Hercon's legal basis for submissions:
December 4, 1987 for Nitro-Bid Ointment-Marion Lab.
June 1, 1989 for NTS Nitroglycerin Transdermal-Bolar.
August 20, 1992 for Nitro-Dur-Key Pharmaceuticals.
April 27, 1993 for Transderm-Nitro-Summit Pharmaceuticals (Ciba). The product has been completely reformulated. The firm stated that this response makes all previously submitted material moot. Therefore, this represents an original application.

- 5. <u>SUPPLEMENT(s)</u> N/A
- 6. PROPRIETARY NAME N/A
- 7. <u>NONPROPRIETARY NAME</u>
  Hercon Nitroglycerin Transdermal System
- 8. <u>SUPPLEMENT(s) PROVIDE(s) FOR:</u> N/A
- 9. <u>AMENDMENTS AND OTHER DATES:</u> Firm:

November 12, 1987: Original Submission December 4, 1987: New correspondence

ANDA 89-884/885/886 Review#4

March 10, 1988: New correspondence
March 11, 1988: Amendment for labeling
May 11, 1988: Amendment for labeling

June 1, 1989: new corres. (address change) August 20, 1992: new corresp.

April 27, 1993: Major amendment April 29, 1994: Major amendment December 8, 1994: Major amendment August 7, 1995: Major amendment

FDA:

December 8, 1987: Acknowledgement letter

February 17, 1988: Deficiency letter

February 17, 1988: Letter for the review by HFN-180

April 25, 1988: labeling deficiency letter

May 18, 1988: information letter

August 31, 1988: labeling deficiency letter

October 29, 1993: Deficiency letter

August 18, 1994: Bio-major deficiency letter

June 14, 1995: Deficiency letter

November 30, 1995: Bio-major deficiency letter

- 10. PHARMACOLOGICAL CATEGORY Coronary vasodilator Rx
- 12. RELATED IND/NDA/DMF(s)

DMF#

DMF#

DMF#

DMF#

DMF#

DMF#

13. DOSAGE FORM

Transdermal System

14. POTENCY

0.2 mg/hr, 0.4 mg/hr

and 0.6 mg/hr

15. CHEMICAL NAME AND STRUCTURE
1,2,3-propanetriol, trinitrate. MW= 227.09
C<sub>1</sub>H<sub>2</sub>N<sub>2</sub>O<sub>6</sub>

CH,ONO, . CHONO, . CH,ONO,

16. RECORDS AND REPORTS

Phone conversation between Hercon and V.Vashio on 8-19-92. Phone conversation between Hercon and Cecilia Parise on 5-24-93.

Memo from Donald Hare to William Rickman on February 2, 1995, regarding the approval of Schering-Key's supplement which would grant unconditional approval to Nitro-Dur.

Schering-Key has submitted a formulation patent which will be listed in the Orange Book at the time of approval. All firms with a pending 505 (b)(2) or 505 (j) application using the Schering product as the reference drug will have to amend their applications with an appropriate patent certification when the Orange Book displays this formulation patent on the approved Nitro-Dur transdermal patch.

Debarment certification is included in December 8, 1994, amendment.

#### 17. COMMENTS

The following deficiencies found in the review

- -Laboratory controls
- -Labeling
- -New Bioequivalence studies pending
- -EER-reinspection requested

#### 18. CONCLUSIONS AND RECOMMENDATIONS

This application is considered as not approvable. The letter will be issued consistent with the letter for applications 88-782, 88-783 and 89-516 (reviewed by G.Smith). The amendment will be considered major.

#### 19. REVIEWER:

DATE COMPLETED:

Sema Basaran Ph.D.

1-4-96 3-4-96 (Labeling) pages of trade

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information Chem-Review#7

#### 1. CHEMISTRY REVIEW # 5

2. <u>ANDA</u> 89-884 89-885 89-886

3. NAME AND ADDRESS OF APPLICANT
Hercon Laboratories Corporation
Attention: Joseph J. Sobecki
P.O. Box 786
York, PA 17405

4. <u>LEGAL BASIS FOR SUBMISSION</u>
Conditionally approved marketed transdermal nitroglycerin product (Transderm-Nitro, Summit Pharmaceuticals [Ciba]).
Transderm-Nitro, release rate 0.2, 0.4 and 0.6 of nitroglycerin per h; Summit Pharmaceuticals (Ciba).
NDA-20-144. The reference listed drug is not entitle to a period of exclusivity under section 505(j)(4)(D) of the FDC act. According to Hercon Labs. patent information has not

application. Nitroglycerin is a DESI drug.

Hercon's legal basis for submissions:
December 4, 1987 for Nitro-Bid Ointment-Marion Lab.
June 1, 1989 for NTS Nitroglycerin Transdermal-Bolar.
August 20, 1992 for Nitro-Dur-Key Pharmaceuticals.
April 27, 1993 for Transderm-Nitro-Summit Pharmaceuticals (Ciba). The product has been completely reformulated. The firm stated that this response makes all previously submitted material moot. Therefore, this represents an original application.

been filed claiming the product which is the subject of this

- 5. <u>SUPPLEMENT(s)</u> N/A
- 6. <u>PROPRIETARY NAME</u> N/A
- 7. <u>NONPROPRIETARY NAME</u> Hercon Nitroglycerin Transdermal System
- 8. <u>SUPPLEMENT(s) PROVIDE(s) FOR:</u> N/A
- 9. AMENDMENTS AND OTHER DATES:

November 12, 1987: Original Submission December 4, 1987: New correspondence

ANDA 89-884/885/886 Review#4

March 10, 1988: New correspondence
March 11, 1988: Amendment for labeling
May 11, 1988: Amendment for labeling

June 1, 1989: new corresp. (address change)

August 20, 1992: new corresp.

April 27, 1993: Major amendment
April 29, 1994: Major amendment
December 8, 1994: Major amendment
August 7, 1995: Major amendment
October 10, 1996: Major Amendment

October 10, 1996: Bioequivalency Amendment

November 22, 1996: New Correspondence November 27, 1996: New Correspondence

FDA:

December 8, 1987: Acknowledgment letter February 17, 1988: Deficiency letter

February 17, 1988: Letter for the review by HFN-180

April 25, 1988: Labeling deficiency letter

May 18, 1988: Information letter

August 31, 1988: Labeling deficiency letter

October 29, 1993: Deficiency letter

August 18, 1994: Bio-major deficiency letter

June 14, 1995: Deficiency letter

November 30, 1995: Bio-major deficiency letter

March 29, 1996: Deficiency letter

10. PHARMACOLOGICAL CATEGORY Coronary vasodilator 11. Rx or OTC

12. RELATED IND/NDA/DMF(s)

DMF#

DMF#

DMF#

DMF#

DMF#

DMF#

13. DOSAGE FORM 14. POTENCY

Transdermal System 0.2 mg/hr, 0.4 mg/hr and 0.6 mg/hr

15. <u>CHEMICAL NAME AND STRUCTURE</u>

1,2,3-propanetriol, trinitrate. MW= 227.09

C<sub>3</sub>H<sub>5</sub>N<sub>3</sub>O<sub>0</sub>

CH20NO2 . CHONO2. CH20NO2

#### 16. RECORDS AND REPORTS

Phone conversation between Hercon and V. Vashio on 8-19-92. Phone conversation between Hercon and Cecilia Parise on 5-24-93. Memo from Donald Hare to William Rickman on February 2, 1995, regarding the approval of Schering-Key's supplement which would grant unconditional approval to Nitro-Dur. Schering-Key has submitted a formulation patent which will be listed in the Orange Book at the time of approval. All firms with a pending 505 (b) (2) or 505 (j) application using the Schering product as the reference drug will have to amend their applications with an appropriate patent certification when the Orange Book displays this formulation patent on the approved Nitro-Dur transdermal patch.

Debarment certification is included in December 8, 1994, amendment.

#### 17. COMMENTS

The following deficiencies found in the review -Labeling -New Bioequivalence studies pending

#### 18. CONCLUSIONS AND RECOMMENDATIONS

These applications can be approved based on acceptable Bioequvalency and labeling. The letter will not be issued until Bioequivalency and labeling issues resolved. (The amendment will be considered major).

19. REVIEWER: DATE COMPLETED:
Sema Basaran Ph.D. 4-14-96

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Chem-Review #5

.8. Chemistry Comments to be Provided to the Applicant

ANDA: 89-884, 89-885, 89-886

APPLICANT: Hercon Laboratories Corporation.

DRUG PRODUCT: Nitroglycerin Transdermal Patch, 0.2 mg/hr, 0.4 mg/hr

and 0.6 mg/hr.

FACSIMILE

The deficiencies presented below represent MEMOR deficiencies.

A. Deficiencies:

\*

Please update your patent certification and resubmit.

B. In addition to responding to the deficiency presented above, please note and acknowledge the following comments in your response:

The Division of Chemistry has no further questions at this time. Please be advised that the suitability of the proposed drug release specifications will be established upon completion of review by the Division of Bioequivalence. Any changes made to the chemistry, manufacturing and controls section of your application as a result of outstanding bioequivalence deficiencies must be submitted and could result in the response being considered a MAJOR Amendment. We further request that you do not respond to this communication until all outstanding bioequivalence and labeling issues have been resolved.

Sincerely yours,

**/**S/

Frank O. Holcombe, Ur., Ph.D.

Director

Division of Chemistry II

Office of Generic Drugs

Center for Drug Evaluation and Research

#### 1. CHEMISTRY REVIEW # 6

2. <u>ANDA</u> 89-884 89-885 89-886

3. NAME AND ADDRESS OF APPLICANT
Hercon Laboratories Corporation
Attention: Joseph J. Sobecki
P.O. Box 786
York, PA 17405

#### 4. LEGAL BASIS FOR SUBMISSION

Conditionally approved marketed transdermal nitroglycerin product (Transderm-Nitro, Summit Pharmaceuticals[Ciba]). Transderm-Nitro, release rate 0.2, 0.4 and 0.6 of nitroglycerin per h; Summit Pharmaceuticals (Ciba). NDA-20-144. The reference listed drug is not entitle to a period of exclusivity under section 505(j)(4)(D) of the FDC act. According to Hercon Labs. patent information has not been filed claiming the product which is the subject of this application. Nitroglycerin is a DESI drug.

Hercon's legal basis for submissions:
December 4, 1987 for Nitro-Bid Ointment-Marion Lab.
June 1, 1989 for NTS Nitroglycerin Transdermal-Bolar.
August 20, 1992 for Nitro-Dur-Key Pharmaceuticals.
April 27, 1993 for Transderm-Nitro-Summit Pharmaceuticals (Ciba). The product has been completely reformulated. The firm stated that this response makes all previously submitted material moot. Therefore, this represents an original application.

- 5. <u>SUPPLEMENT(s)</u> N/A
- 6. <u>PROPRIETARY NAME</u> N/A
- 7. NONPROPRIETARY NAME
  Hercon Nitroglycerin Transdermal System
- 8. <u>SUPPLEMENT(s) PROVIDE(s) FOR:</u> N/A
- 9. <u>AMENDMENTS AND OTHER DATES:</u> Firm:

November 12, 1987: Original Submission December 4, 1987: New correspondence

#### ANDA 89-884/885/886 Review#6

March 10, 1988: New correspondence
March 11, 1988: Amendment for labeling
May 11, 1988: Amendment for labeling
June 1, 1989: new corres. (address change)

August 20, 1992: new corresp.

April 27, 1993: Major amendment
April 29, 1994: Major amendment
December 8, 1994: Major amendment
August 7, 1995: Major amendment
October 10, 1996: Major Amendment

October 10, 1996: Bioequivalency Amendment

November 22, 1996: New Correspondence November 27, 1996: New Correspondence June 5, 1997: Facsimile amendment

#### FDA:

December 8, 1987: Acknowledgement letter

February 17, 1988: Deficiency letter

February 17, 1988: Letter for the review by HFN-180

April 25, 1988: labeling deficiency letter

May 18, 1988: information letter

August 31, 1988: labeling deficiency letter

October 29, 1993: Deficiency letter

August 18, 1994: Bio-major deficiency letter

June 14, 1995: Deficiency letter

November 30, 1995: Bio-major deficiency letter

March 29, 1996: Deficiency letter

May 30, 1997: Bio-fatal deficiency letter May 7, 1997: Facsimile Deficiency letter

## 10. PHARMACOLOGICAL CATEGORY Coronary vasodilator

11. Rx or OTC

#### 12. RELATED IND/NDA/DMF(s)

DMF#

DMF#

DMF#

DMF#

DMF#

DMF#

#### 13. DOSAGE FORM

14. POTENCY

Transdermal System 0.2 mg/hr, 0.4 mg/hr

and 0.6 mg/hr

#### 15. CHEMICAL NAME AND STRUCTURE

1,2,3-propanetriol, trinitrate. MW= 227.09

 $C_3H_5N_3O_9$ 

#### 16. RECORDS AND REPORTS

Phone conversation between Hercon and V. Vashio on 8-19-92. Phone conversation between Hercon and Cecilia Parise on 5-24-93.

Memo from Donald Hare to William Rickman on February 2, 1995, regarding the approval of Schering-Key's supplement which would grant unconditional approval to Nitro-Dur. Schering-Key has submitted a formulation patent which will be listed in the Orange Book at the time of approval. All firms with a pending 505 (b)(2) or 505 (j) application using the Schering product as the reference drug will have to amend their applications with an appropriate patent certification when the Orange Book displays this formulation patent on the approved Nitro-Dur transdermal patch.

Debarment certification is included in December 8, 1994, amendment.

Please refer our leter dated of May 7, 1997. Updated patent Certification requested.

The firm's comment: Their original patent certification dated April 16, 1993, is enclosed as Attachment 1. Based on 21 CFR 314.94 (a) (12) (vi) pertaining to Late Submission of Patent Information, they are not required to re-certify against the Ciba patents that first appeared in the Orange Book in the January '96 to December 96Cumulative Supplement (copy of page enclosed as Attachment 2). The approval of Ciba's Transderm Nitro first appeared in the Orange Book in the January '96 to February 96 Cumulative Supplement (copy pages enclosed aAttachment 3). The patents appeared in the Orange Book a full ten months after the Ciba Transderm Nitro approval appeared in the Orange Book. Satisfactory.

#### 17. COMMENTS

The following deficiencies found in the review -Labeling -New Bioequivalence studies required.

#### 18. CONCLUSIONS AND RECOMMENDATIONS

These applications can be approved based on acceptable Bioequvalency and labeling. The approval letter will not be issued until Bioequivalency and labeling issues resolved. (The amendment will be considered minor).

## 19. REVIEWER: DATE COMPLETED: Sema Basaran Ph.D. 6-30-97

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Chem Roview #6

#### CDER Establishment Evaluation Report for April

14, 1997

Application: ANDA 89886/000

Priority:

Org Code: 600

Stamp: 16-NOV-1987 Regulatory Due:

Action Goal:

District Goal: 16-JAN-1989

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of 1

Applicant:

**HERCON LABS** 

Brand Name:

**200 B CORPORATE CT** 

Established Name: NITROGLYCERIN

**SOUTH PLAINFIELD, NJ 07080** 

Generic Name: Dosage Form:

FLM (TRANSDERMAL SYSTEM)

Strength:

0.6 MG/HR

FDA Contacts: T. AMES

(HFD-617)

301-594-0305 , Project Manager

S. BASARAN

(HFD-647)

301-594-0305 , Review Chemist

Overall Recommendation:

Establishment: 2522638

DMF No:

HERCON LABORATORIES CORP SU

ABERDEEN RD AND SINKING SPRIN

EMIGSVILLE, PA 17318

Profile: NEC

OAI Status: NONE

Last Milestone: SUBMITTED TO OC 14-APR-1997

Responsibilities:

FINISHED DOSAGE MANUFACTURER

Establishment:

DMF No:

Profile: CSN

OAI Status: NONE

Last Milestone: SUBMITTED TO OC

14-APR-1997

Responsibilities:

DRUG SUBSTANCE MANUFACTURER

Profile: NEC

OAI Status: NONE

Last Milestone: SUBMITTED TO OC

14-APR-1997

## DEPARTMENT OF HEALTH AND HUMAN SERVICES Public Health Service FOOD AND DRUG ADMINISTRATION

### **ESTABLISHMENT EVALUATION REQUEST**

			1.8054	
☐ JEST TYPE (Check One)  ☐ Original FollowUp ☐ FUR	DATE May 4, 1995	PHONE NO. (301) 594-0305		
REQUESTORS NAME: Sema Basaran	DIVISION: Office of Generic Drugs		MAIL CODE: HFD-647	
APPLICATION AND SUPPLEMENT NUMBER: ANDA	89-884, 69-885, 89	-886		
BRAND NAME:	ESTABLISH	ED NAME: Nitroglycerin Trans	dermal Delivery System	
DOSAGE STRENGTH: 0.2 mg/hr, 0.4 mg/hr, 0.6 m	ig/hr		STERILE □Yes 🖾 No	
PROFILE CLASS:: NEC (Transdermal Patch)	PRIORITY CLASSIFICATION (See SMG CDER-4820.3)			
APPLICANTS NAME: Hercon Laboratories Corpo	ration			
APPLICANTS ADDRESS: Sinking Spring Lane Emigsville, Pennsylvani	a 17318			
COMMENTS: Note that the transdermal patches and 89-516 except for the area (size) of the pat to distinguish or segregate different products (e 884). Please confirm adequate controls are in previously provided, except for provisions made	ch for a specified relate.g. the 0.2 mg/hr pate place. Note also that	ease rate. This raises serious ch for ANDA 88-782 from the it themanufacturing operations	concerns regarding the ability 0.2 mg/hr patch for ANDA 89-	

FACILITIES TO BE EVALUATED (Name and Complete Address)	RESPONSIBILITY	DMF NUMBER/ PROFILE CODE	FKEY CIRTS ID
Hercon Laboratories Corporation Sinking Springs Lane	Manufacture of drug product		
Emigsville, Pennsylvania 17318	(Transdermal Patch)	NEC Transdermal Patch	
2.	Manufacture of drug substance		
3.		·	
4.			
5.			

1 FDA 3274 (8/92) Distribution: Original and Yellow Copy: HFD-324.

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